CLAIMS

What is claimed is:

1. A wire winding machine, comprising:

a mandrel having a removable end cap for winding wire thereon;

a clamp for securing a wire to said mandrel in response to said end cap being secured to said mandrel, and releasing said wire in response to said end cap being removed from said mandrel.

2. The machine of claim 1, wherein securing wire to said mandrel comprises both clamping and cutting the wire.

3. A clamping and cutting mechanism for a wire winding machine mandrel having a removable end cap and mounted on a shaft, said mechanism comprising:

a fixed block secured to said mandrel, said block including a clamping surface and a cutting edge;

a pivotally lever including a clamping finger and a cutting finger, and further including an actuating arm extending at least partially around said shaft;

said lever actuated by said end cap, and operative to clamp and cut a wire in response to said end cap being secured to said mandrel.

4. The clamping and cutting mechanism of claim 3, wherein said clamping finger and said cutting finger are recessed into voids formed in said mandrel when said end cap is removed from said mandrel.

5. The clamping and cutting mechanism of claim 3, further including a wire gauge adjustment mechanism for permitting said clamping and cutting mechanism to accommodate various gauges of wire.

6. The clamping and cutting mechanism of claim 5, wherein said wire gauge adjustment mechanism includes a screw and a wire engaging surface secured to said screw such that

adjustment of said screw varies the effective distance between said clamping surface and said clamping finger.

7. The clamping and cutting mechanism of claim 3, wherein said clamping and cutting mechanism is biased to an open position when said end cap is removed from said mandrel.

8. A wire winding mandrel, comprising:

a mandrel mounted on a shaft for winding wire thereon;

an end cap removably connected to said mandrel;

a spacing collar mounted on said shaft and operative to translate along said shaft between an outer and inner position, said collar biased to said outer position;

a fixed block secured to said mandrel, said block including a clamping surface and a cutting edge;

a pivotally mounted lever moveable between an open and closed position, said lever including a clamping finger and a cutting finger, and further including a wishbone actuating arm extending at least partially around said shaft, said lever biased to an open position; and

wherein, said end cap, when secured to said mandrel, urges said collar from said outer to said inner position, actuating said actuating arm and urging said clamping finger proximate said clamping surface of said fixed block to clamp a wire positioned therebetween and engaging said cutting finger with said cutting edge of said fixed block to cut a wire positioned therebetween.

9. A method of transferring wire to the winding mandrel of a wire winding machine, said mandrel having a removable end cap, comprising:

guiding the wire into a clamping and cutting mechanism affixed to said mandrel by positioning the wire adjacent said mandrel; and

clamping and cutting the wire in response to said end cap being secured to said mandrel.

10. The method of claim 9 further comprising releasing the wire in response to said end cap being removed from said mandrel.